retroviral vector particles *in vivo*, enabling virus-mediated delivery of the hetrologous gene to the target cell.--.

IN THE CLAIMS

Please cancel claims 26-46 without prejudice and add new claims 47-59 as follows:

47. (NEW) A method for introducing a heterologous gene into a target cell in a subject, which comprises the following steps:

(i) conversion of a subject's cell into a producer cell capable of producing a replication defective retroviral vector, comprising introducing into the subject's cell:

a first DNA sequence encoding a replication defective retroviral vector, which comprises

(a) a defective retroviral genome lacking functional *env* and functional *gag-pol* genes but having the remaining components essential for retroviral functions; and

(b) the heterologous gene; and

a second DNA sequence capable of encoding packaging components *env* and *gag-pol*, wherein the DNA sequence encoding *env* is present on a separate construct than the DNA sequence encoding *gag-pol*;

(ii) production of replication defective retroviral vector particles *in vivo* by the producer cell; and

(iii) virus-mediated delivery of the heterologous gene to the target cell *in vivo*.

48. (NEW) A method according to claim 47, in which the cell is isolated from the subject, converted into a producer cell *ex vivo*, and then reimplanted in the subject.

49. (NEW) A method according to claim 47, wherein the cell is converted into a producer cell *in vivo*.

50. (NEW) A method according to claim 47 in which the producer cell is of the same type as the target cell

51. (NEW) A producer cell capable of producing a replication defective retroviral vector in an infective retroviral particle, the producer cell comprising a set of DNA sequences comprising: a first DNA sequence encoding a replication defective retroviral vector, which comprises

(i) a defective retroviral genome lacking functional *env* and functional *gag-pol* genes but having the remaining components essential for retroviral function; and

(ii) at least one heterologous gene; and

a second DNA sequence encoding a DNA sequence capable of encoding packaging components *env* and *gag-pol* wherein the DNA sequence encoding *env* is present on a separate construct to the DNA sequence encoding *gag-pol* which producer cell is a fresh cell from a subject and is capable of delivering the heterologous gene to a target cell within the subject by *in vivo* production of replication defective retroviral vector particles.

52. (NEW) A producer cell according to claim 51, which is made by

(i) isolation of a cell from the subject; and

(ii) introduction of the set of DNA sequences to the cell *ex vivo* causing conversion of the cell into a producer cell.

53. (NEW) A producer cell according to claim 52, for reimplantation into the subject.

54. (NEW) A producer cell according to claim 51, which is made by introduction of the set of DNA sequences to a cell within the subject causing *in vivo* conversion of the cell into a producer cell.

55. (NEW) A producer cell according to claim 51, which is an immune cell.

56. (NEW) A producer cell according to claim 54, for use in medicine.

57. (NEW) A producer cell according to claim 54, for use in gene therapy.

58. (NEW) A method of making a replication defective [illegible] vector comprising of at least one heterologous gene for deliver to a target cell within the subject.